Release B CDR RID Report

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Section **Page** **Figure Table**

Category Name Hardware **Actionee** ECS

Sub Category

Subject CERES/TRMM and CERES/AM-1 science processing hardware is out of sync at the Langley DAAC during Release B.

Description of Problem or Suggestion:

The CERES/TRMM and CERES/AM-1 science software is the same. The decision not to upgrade the SGI science processor for CERES/TRMM from the R8000 CPU chip to the R10000 CPU chip forces the DAAC to SSI&T and maintain the CERES science software on two different CPU architectures.

Originator's Recommendation

The CERES/TRMM and CERES/AM-1 science software should be supported on a single SGI CPU chip (R10000) for Release B.

Earlier installation of the R10000 CPU chip during Release A to gain experience with the new SGI compiler should be investigated.

GSFC Response by: **GSFC Response Date**

HAIS Response by: R. Miller **HAIS Schedule**

HAIS R. E. M. Armstrong **HAIS Response Date** 7/6/96

The CDR-B design calls for existing R8000-based science processors at LaRC to be used (without upgrading to the R10000) throughout the CERES/TRMM lifecycle. There were two reasons for this decision: the capacity of these machines (without upgrading) is a good match for CERES/TRMM, and there was concern about disruption of Release A activities if the machines were upgraded.

However, the DAAC has raised legitimate concerns about impacts to operations caused by operating CERES on two different platforms. Also, the implementation of the first incremental buy for Release B and the installation of Release A.1 make the logistics for an upgrade more tenable.

HAIS therefore recommends that all of the LaRC science processors be upgraded to the R10000 chip via the first incremental buy for Release B, to be installed 1Q97 (CY). This activity would be integrated with the schedule for the installation of the A.1 software release, since it necessitates an operating system upgrade that is first supported in the A.1 software.

Taking into account the trade-in value of the existing boards and differences in the MFLOPS ratings of the processors, there is a net impact to the program of approximately $80K for this upgrade.Further Action
(e.g., scheduled meetings, further analysis, studies, data gathering, etc.): Completing data gathering for the end-to-end model; performing model runs and analyses for release A; publishing and distributing model inputs and outputs; and replanning what to do with the existing release A hardware purchases (if needed).

Status **Closed** **Date Closed** **7/16/96** **Sponsor** **Marinelli**

****** **Attachment if any** ******